

What is claimed is:

5001. A method for enhancing presentation of text having an author specified word order comprising:

- a) extracting text specific attributes from said text; and
- b) varying said text presentation in accordance with said attributes, while substantially maintaining said author specified word order.

2. A method for enhancing text presentation as recited in claim 1, wherein said text specific attributes include text location within a text body, said text presentation includes background color, and said presentation includes varying said background color in accordance within said text location.

3. A method for enhancing text presentation as recited in claim 1, wherein said text specific attributes include a text difficulty measure, and said text presentation includes an automatic text advancement rate, and said presentation includes varying said text presentation rate in accordance within said text difficulty measure.

4. A method for enhancing text presentation as recited in claim 3, wherein said text difficulty measure includes an estimated pronunciation time of said text.

5. A method for enhancing text presentation as recited in claim 3, wherein said text difficulty measure includes an estimated educational level of said text.

6. A method for enhancing text presentation as recited in claim 1 wherein:

- a) said attributes include punctuation and parts of speech;
- b) extracting includes parsing said text into punctuation and parts of speech;
- c) said varied text presentation is implemented using rules having inputs and outputs;
- d) said rule inputs including said parts of speech;
- e) said enhanced text presentation includes visual attributes; and
- f) said rule outputs including said visual attributes.

7. A method for enhancing text presentation as recited in claim 6 wherein:

- a) said rules include folding rules;
- b) said folding rules dividing said text into text segments; and
- c) said folding rule inputs include punctuation.

8. A method for enhancing text presentation as recited in claim 7 wherein said folding rule inputs further include parts of speech.

9. A method for enhancing text presentation as recited in claim 8 wherein said visual attributes include the displaying of said text segments in a color depending on said parts of speech.

10. A method for enhancing text presentation as recited in claim 8 wherein said visual attributes include the displaying of said text segments on new lines.

11. A method for enhancing presentation of text having an author specified text sequence comprising:

a) extracting text specific attributes from said text; and

b) varying said text presentation quantitatively in accordance with said attributes, while substantially maintaining said text sequence.

12. A method for enhancing text presentation as recited in claim 11, wherein said text presentation unambiguously represents said text sequence.

13. A method for enhancing text presentation as recited in claim 12, wherein said text presentation includes no non-textual symbols in association with said text.

14. A method for enhancing text presentation as recited in claim 11, wherein said text is displayed in a perspective view such that text segments above other segments appear to be further away from the reader, such that in reading said text from bottom to top said text appears to be reading from front to back.

15. A method for enhancing text presentation as recited in claim 11, wherein said text presentation includes display of a plurality of text segments, each of said text segment displays having a starting horizontal and vertical displacement, wherein said horizontal and vertical displacements are varied quantitatively in accordance with said attributes.

16. A method for enhancing text presentation as recited in claim 11 wherein said attributes include punctuation and parts of speech.

17. A method for displaying text including words, phrases, and sentences comprising:

having a reader-performer read the text aloud, wherein said reader-performer performs actions selected from the group consisting of speaking, hand movement, eye movement, head movement, and mouth movement;

electronically recording said actions of said reader-performer corresponding to said text;

displaying said text;

varying said text display in accordance with said reader-performer actions.

18. A method for displaying text including words, phrases, and sentences as recited in claim 17 wherein said spoken speech attributes are recorded and said text display is varied in accordance with said spoken speech attributes.

19. A method for displaying text as recited in claim 18 wherein said spoken speech attributes are selected from the group consisting of pitch, tone, volume, and pauses between words.

20. A method for displaying text as recited in claim 19 wherein said text display has display attributes varied in accordance with said spoken speech attributes and said display attributes are selected from the group consisting of font, intensity, font line thickness, font character

height, inter-character spacing, inter-word spacing, inter-line spacing and inter-sentence spacing.

21. A method for displaying text as recited in claim 18 wherein said hand gestures are recorded and said text display is varied in accordance with said hand gestures.

22. A method for displaying text as recited in claim 21 wherein said hand gestures include hand position and orientation and finger position and orientation.

23. A method for displaying text as recited in claim 21 wherein said text display includes modifying the horizontal displacement of said text as a function of the horizontal displacement of said hands and said text display includes modifying the vertical displacement as a function of said hand vertical displacement.

24. A method for displaying as recited in claim 18 wherein said facial gestures are recorded and said text is displayed in accordance with said facial gestures.

25. A method for displaying text as recited in claim 24 wherein said recorded facial gestures are selected from the group consisting of eye shape, eye openness, eyebrow position, and mouth shape.

26. A method for displaying text having text specific attributes comprising:

generating a curved line; and
positioning said text on said curved line,
wherein said curved line shape is a function of said text attributes.

27. A method for displaying text as recited in claim 26 wherein said curved line shape is a function of a reader-performer's recorded presentation selected from the group consisting of vocal pitch, vocal tone, vocal volume, hand gestures, and facial expressions.

28. A method for displaying text as recited in claim 26 herein said curved line is substantially less visible than said displayed text.

29. A method for displaying text as recited in claim 26 wherein said curved line is invisible.

30. A method for displaying multiple text hierarchies comprising:

displaying a first hierarchy of text as a plurality of overlapping windows having exposed, substantially parallel margins; and

displaying a second hierarchy of text as a plurality of overlapping windows having exposed, substantially parallel margins, wherein said second hierarchy of text is lower in rank than said first hierarchy of text, wherein said second hierarchy margins are oriented at an angle relative to said first hierarchy margins.

31. A method for displaying multiple text hierarchies as recited in claim 30 further comprising a selected window in said first hierarchy, wherein said selected window has said second hierarchy windows displayed within.

32. A method for displaying multiple text hierarchies as recited in claim 32 further comprising selecting a selected window in said second hierarchy, wherein said second selected window has text displayed within.

33. A method for displaying multiple text hierarchies comprising:

displaying a first hierarchy of text as a plurality of substantially vertically oriented overlapping windows having exposed horizontal margins; and

displaying a second hierarchy of text as a plurality of substantially horizontally oriented overlapping windows having exposed vertical margins, wherein said second hierarchy of text is lower in rank than said first hierarchy of text.

34. A method for displaying multiple text hierarchies comprising:

displaying a first hierarchy of text as a plurality of substantially horizontally tiled planes;

displaying a second hierarchy of text as a plurality of substantially vertically tiled planes, wherein said second hierarchy of text is lower in rank than said first hierarchy of text.

35. A method for displaying multiple text hierarchies comprising:

displaying a series of text hierarchies as alternating horizontally tiled plane sets and vertically tiled plane sets.

36. A method for displaying multiple text hierarchies as recited in claim 35 wherein said series of text hierarchies is selected from the group consisting of volumes, chapters, sections, paragraphs, and sentences.

37. A method for displaying multiple text hierarchies as recited in claim 35 further comprising allowing a human reader to select a unit of text in said hierarchies, wherein when said selected unit is substantially horizontally tiled said units move apart substantially vertically, wherein when said selected unit is substantially vertically tiled said units move apart substantially horizontally, such that said

selected unit is further away from at least one other adjacent unit after said movement.

38. A method for displaying multiple text hierarchies as recited in claim 39 wherein a lower hierarchy is displayed after said units move apart.

39. A method for displaying multiple text hierarchies as recited in claim 38 wherein said lower hierarchy is tiled horizontally when said moved apart hierarchy is tiled vertically and said lower hierarchy is tiled vertically when said moved apart hierarchy is tiled horizontally.

40. A method for displaying multiple text hierarchies as recited in claim 35 wherein said sentences are represented as a series of vertically tiled pages, wherein, when a sentence unit is indicated as having been read, said pages slides to the left, such that a page previously at least partially underneath is exposed for reading.

41. A method for displaying text comprising:
displaying a left page having text content, a right margin and a left margin,

displaying a right page having text content, a right margin and a left margin,

wherein said left page right margin substantially overlies said right page left margin while said left page is being read and said right page left margin substantially overlies said left page right margin while said right page is being read.

42. A method for displaying text as recited in claim 41 further comprising

removing said left page content when said left page has been read and exposing a subsequent left page content, and

removing said right page content when said right page has been read and exposing a subsequent right page content,

such that a text segment extending from one page to a subsequent page can be read without requiring scrolling to read said text segment content extending to said subsequent page.

43. A method for displaying text as recited in claim 42 wherein said page being read is indicated by reader action.

44. A method for displaying text as recited in claim 42 wherein said page being read is indicated by an estimate of reading speed based at least in part on time.

45. A method for displaying text having an original sequence comprising:

segmenting said text into a plurality of segments; and displaying said segments on a plurality of lines, wherein reading said text from bottom to top substantially preserves said original sequence,

wherein said text is displayed in a perspective view such that text segments above other segments appear to be further away from the reader, such that in reading said text from bottom to top said text appears to be reading from front to back.

46. A method as recited in claim 45 wherein said text is displayed in a font decreasing in size from bottom lines to top lines of text.

47. A method as recited in claim 45 further comprising placing a partially translucent virtual lens over text above the lower line being read, such that text above said lower line is visible but less easily read than the text below the line.

48. A method as recited in claim 45, wherein the text above said certain line is less bright than the text line being read.

49. A method as recited in claim 45 wherein said text in a line being read is removed after indicated as read and a

line of text immediately behind said line being read is displayed to appear closer to the reader, such that the reader appears to be moving forward through the text being read.

50. A method for displaying text comprising the steps of:

providing text encoded as follows

a. analyzing a sentence, subdividing said sentence into a plurality of text segments based on relationships of said text segments to each other;

b. organizing said text segments into a tree having a root parent node and a plurality of parent nodes and child nodes;

c. assigning each child node an attribute based on the relationship with the parent node of said child;

d. assigning said root node a color;

e. for each child node beneath the root node, assigning a color to each child node based upon the color of the parent node and modified by the relationship between the child node and the parent node;

f. repeating step e until all nodes have a color assigned;

g. displaying said text in lines in substantially the same order specified by the author using the color assigned in the tree.

51. A method as recited in claim 50 further wherein said parent-child relationships are selected from the group consisting of entity, action and modification.

52. A method for enhancing text presentation comprising:

- a) providing folding rules utilizing parts of speech and punctuation marks, wherein said folding rules include primary rules and secondary rules, said primary rules utilizing punctuation marks and said secondary rules utilizing parts of speech, wherein said secondary folding rules include a micro-grammar for disambiguating the parts of speech;
- b) providing text segment horizontal displacement rules, wherein the rules utilize parts of speech;
- c) providing a minimum text segment length;
- d) providing a maximum text segment length;
- e) parsing said text into words and punctuation marks;
- f) determining the likely parts of speech of the words from step e;
- g) determining primary folding point locations in said text by applying the primary folding rules, thereby dividing said text into super-phrases;
- h) determining secondary folding point locations in the super-phrases by applying the secondary folding rules, thereby dividing the super-phrases into text segments;

- i) repeating step h until all text segments are no greater than the maximum text segment length, and no less than the minimum text length;
- j) applying the text segment horizontal displacement rules to the text segments, thereby determining the horizontal displacement for each text segment;
- k) mapping each of said text words to an audio recording of said text words; and
- l) playing back said recorded text words, inserting pauses in accordance with said horizontal displacement.

*AC&J
X17*